

# Export Transmission Service Tariff Review

Impact Assessments and Analysis

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# Overview of the ETS Study Plan – Key Features

- Results of preliminary discussions with neighbours to inform study approach and methodology.
- Three forms of ETS design and rate options will be reviewed:
  - Option 1 – Status Quo (Baseline Scenario),
  - Option 2 – Equivalent Average Network Cost (\$/MWh)
  - Option 3 – Reciprocal Tariff Treatment (i.e., elimination of tariff on all interfaces, and various other potential reciprocal arrangements)

# Overview of the ETS Study Plan – Key Features cont...

- Assess and analyse the potential impact of each ETS design and rate(s) options with respect to:
  - Hourly Ontario Energy Price (HOEP);
  - Export Revenues
  - Export and Import Volumes; and
  - Market Efficiency (i.e., total consumer and producer surplus)
- IESO will not attempt to optimize any of these parameters; rather, it seeks to ascertain the potential impact on each parameter.

# Overview of the ETS Study Plan – Key Features cont...

- Review potential impacts on each of these four parameters and propose the appropriate ETS design and rate(s) which strikes a balance between:
  - simplicity of implementation (i.e., consideration of implementation requirements and challenges);
  - fairness and equity (i.e., promotes convergence of ETS tariff in Ontario and respective neighbours);
  - degree to which it will enhance market efficiency (i.e., maximize consumer and produce surplus); and
  - consistency with rates in neighbouring markets (i.e., consistency between ratepayers in Ontario and neighbouring markets).
- IESO may seek further stakeholder input to determine relative weighting of the selection criteria.

# Key Assessments and Analysis

- Assessment of ETS design and rate options on:
  - Hourly Ontario Energy Price (HOEP)
  - ETS Revenues
  - Trade Volumes
  - Market Efficiency (i.e., consumer and producer surplus)
- The IESO uses Cost-Benefit analysis to assess the impacts

# Assessment of ETS design and rate options

- Hourly Ontario Energy Price (HOEP)
- ETS Revenues
- Trade Volumes
  - Export Volumes
  - Import Volumes

# Assessment of ETS design and rate options

- Market Efficiency (i.e., consumer and producer surplus)
  - Total surplus consists of consumer and producer surplus
  - The consumer surplus accruing to a consumer from the consumption of  $X$  units of a good is the difference between the maximum amount that she would pay for the  $X$  units and the amount that she actually pays. It is measured as the area under the demand curve but above the price
  - Producer surplus is measured in an analogous manner, but using supply curves. It is measured as the area above the supply curve but below the price.
  - A tariff design and rate(s) which maximizes total surplus would be considered economically efficient.

# Option 1-Baseline Scenario

- Set Ontario ETS at \$1/MWh
- Set New York , Michigan and HQ at their current tariffs( assume current tariffs prevail in 2010)
- Apply demand/supply profile in 2010
- Solve for market prices in 2010
- Compute average price (HOEP), ETS revenues, Trade Volume, Total Surplus

# Option 2 – Equivalent Average Network Cost

- Set Ontario ETS at the equivalent average network cost.
- Set New York , Michigan and HQ at their current tariffs ( assume current tariffs prevail in 2010)
- Apply demand/supply profile in 2010
- Solve for market prices in 2010
- Compute average price(HOEP), ETS revenues, Trade Volume, Total Surplus

# Option 3 – Elimination of ETS Tariff

- Set Ontario ETS at \$0/MWh( assume this extreme outcome to assess upper bound on estimated impacts)
- Set New York , Michigan and HQ at \$0/MWh
- Apply demand/ supply profile in 2010
- Solve for market prices in 2010
- Compute average price(HOEP), ETS revenues, Trade Volume, Total Surplus

# Option 3 – Other Potential Reciprocal Tariff Design and Rate(s) Scenarios

- Under this option the IESO plans to explore a series of potential reciprocal tariff design and rate scenarios. For example:

## Scenario 1

- Ontario eliminate the ETS tariff on the Ontario/New York interface only and change the current tariff to equal the other interfaces

	Ontario/New York	Ontario/MISO	Ontario/Quebec	Ontario/PJM
First Run	\$0 / MWh	Equal	Equal	Equal

# Incremental Impact Analysis

	Baseline [A]	Option 1 [B]	Option 2 [C]	Incremental Impact : Option 1 [B]-[A]	Incremental Impact : Option 2 [C]-[A]
HOEP					
REVENUES					
EXPORT VOLUME					
IMPORT VOLUME					
TOTAL SURPLUS					